

LXVIII.—Notes on South-American Rodents.

By OLDFIELD THOMAS.

I.—A new Name for *Sciurus Roberti*, Thos.

IN 1903 * I gave to an Eastern Brazilian squirrel the above name in honour of its discoverer Mr. Alphonse Robert. But two years before † Mr. Bonhote had already used the same term for a squirrel obtained by Mr. Robert Swinhoe in Formosa, and I would therefore propose for the Brazilian species the name of *Sciurus Alphonsei*.

II.—On the Allocation of certain Species hitherto referred respectively to *Oryzomys*, *Thomasomys*, and *Rhipidomys*.

IN connexion with Mr. W. H. Osgood's work on the genus *Peromyscus*, my attention has been drawn by him to the characters that distinguish the group containing "*Hesperomys* (*Rhipidomys*) *cinereus*, Thos.," which was made the type of a special genus "*Thomasomys*" by Dr. Elliott Coues in 1884 ‡. But with the exception of one more recent description of my own, the name has hitherto been practically ignored. It is used, however, in Trouessart's Catalogue on the authority of that one description.

Now, however, a revision of a number of the species concerned shows that *Thomasomys* (the cacophony of whose name I deplore) is a well-defined group, containing a considerable number of species, and that it may be distinguished from *Oryzomys* by certain characters of the palate, well shown in some admirable figures published by Mr. Outram Bangs in 1900 §, and by the possession, in most of the species, of only 1—2=6 mammae, as compared with the invariable 2—2=8 of *Oryzomys*.

In *Oryzomys* (including the subgenus *Oligoryzomys*, Bangs) the palate extends some distance behind the posterior border of the last molar, the palatal notch is narrowed or pointed, and on each side of it, between *m*³ and the corner of the mesopterygoid fossa ||, there is a small pit or pair of pits,

* Ann. & Mag. Nat. Hist. (7) xii. p. 463 (1903).

† *Sciurus thaicwanensis Roberti*, Ann. & Mag. Nat. Hist. (7) vii. p. 166 (1901).

‡ Am. Nat. xviii. p. 1275 (1884).

§ Proc. New England Zool. Club, i. p. 94. pl. i. (1900).

|| A good deal of confusion has arisen as to the use of the words meso- and interpterygoid for the fossae situated (*a*) between the pterygoids in the middle line and (*b*) those placed laterally between the ecto- and entopterygoids of either side, the former being median and unpaired, the

often deeply excavated and always readily perceptible. This style of palate is shown in Mr. Bangs's figures 1 *b* and 2 *b* of the plate quoted.

In *Thomasomys*, on the other hand, with which I must synonymize *Erioryzomys*, Bangs, the mesopterygoid fossa extends further forward (to between the last molars), is, as a rule, rather more squarely open in front than in *Oryzomys*, and there are no lateral pits. Mr. Bangs's figure 3 *b* shows excellently this type of palate.

To the genus as thus defined the following species, mostly described under *Oryzomys*, prove to be referable, though, of course, the number of mammae is not as yet known in all of them:—

- Thomasomys princeps*, Thos.
- *prator*, Thos.
- *aureus*, Tomes.
- *pyrrhonotus*, Thos.
- *vestitus*, Thos.
- *cinereus*, Thos. (Type of genus.)
- *Kalinowskii*, Thos.
- *incanus*, Thos.
- *paramorum*, Thos.
- *Taczanowskii*, Thos.
- *laeops*, Thos.
- *niveipes*, Thos.
- *laniger*, Thos.
- *monochromos*, Bangs. (Type of *Erioryzomys*, Bangs.)
- *ferrugineus*, Thos.
- *dorsalis*, Hensel.
- *sublineatus*, Thos.

It will be noticed that nearly all these species are inhabitants of the mountainous regions of N.W. South America, from Colombia to Peru, none of them penetrating into Central

latter lateral and paired. To avoid this confusion I would suggest that while the former, the median one, might still be called the mesopterygoid fossa, the new name of parapterygoid might be given to the lateral ones, the names themselves then explaining the positions that the fossæ respectively bear to the skull as a whole.

Mr. Miller, in figuring a Microtine skull (N. Am. Faun. no. 12, p. 27, 1896), has followed the usage of the human anatomists in calling the lateral fossæ simply "*pterygoid*," and then using interpterygoid for the median one; but other authors have used this latter name for the lateral ones, and as the names do not explain themselves, their misuse is always probable. It would therefore seem advisable to drop them altogether and to use terms which are self-explanatory.

America. But three of them—*sublineatus*, *ferrugineus*, and *dorsalis*—extend into Eastern Brazil, the first-named in the north, the other two in the south. *T. ferrugineus* and *dorsalis* are also exceptional in possessing $2-2=8$ mammæ.

No doubt other described species will be found to be referable to *Thomasomys*, but the above are all that I have as yet been able to identify.

But, further, a study of the same mammary and palatal characters in the series of forms that have been allocated to *Rhipidomys* brings out the fact that among these there are two distinct groups differing from each other exactly as do *Oryzomys* and *Thomasomys*; for up to the present no accurate definition of "*Rhipidomys*" has been given, and the fact that the tail of any species is more or less tufted and that the animal had certain other external peculiarities have been taken as sufficient reason for its reference to what I now find to be the composite genus *Rhipidomys*.

The true *Rhipidomys* has $1-2=6$ mammæ, a long heavily tufted tail, broad climbing feet, and the palatal characters of *Thomasomys*, from which it is to be distinguished by its external peculiarities and by the presence of well-marked divergent supraorbital ridges, these being practically absent in *Thomasomys*.

The species to which the following specific names have been given appear to belong to this genus:—*leucodactylus*, Tschudi (type of genus); *mastocalis*, Lund; *macrurus*, Gerv.; *latimanus*, Tomes; *ochrogaster* and *Couesi*, Allen; *Sclateri*, *Goodfellowi*, *venezuelae*, *venustus*, *microtis*, *pictor*, *nitela*, and *fulviventris*, Thos.; and *Macconnelli*, de Winton; but the last-named is somewhat aberrant in other characters than those above mentioned, and may hereafter prove to be separable from the rest.

The species belonging to the second group have absolutely the skull of *Oryzomys*, and they also, so far as is known, have $2-2=8$ mammæ. It is clear, therefore, that they should be altogether removed from *Rhipidomys*, and either assigned to *Oryzomys* or form a special group of their own.

On the whole it appears to me they may best be regarded as a subgenus of *Oryzomys*, as follows:—

CECOMYS*, subgen. nov.

Number of mammæ ($2-2=8$) and essential skull-characters as in *Oryzomys*, though there is a tendency for the brain-case

* οἶκος, a house. Quite a number of specimens, of different species, are noted as having been caught in native houses.

to be proportionally larger, more rounded, and *Rhipidomys*-like. Feet broad, suited for climbing; fifth hind toe proportionally long. Tail with the body-fur encroaching on its base for half an inch or more; terminal part well haired—more so than in true *Oryzomys*—and generally pencilled, though never so heavily as in *Rhipidomys*.

Type. Rhipidomys benevolens, Thos.

The following is the list of species belonging to this group:—

- Oryzomys* (*Ecomys*) *bicolor*, Tomes.
- (—) *dryas*, Thos. (probably = *bicolor*).
- (—) *benevolens*, Thos. (Type.)
- (—) *marmosurus*, Thos.
- (—) *mamoræ*, Thos. (*infra*).
- (—) *pheotis*, Thos.
- (—) *paricola*, Thos.
- (—) *rosilla*, Thos.
- (—) *Roberti*, Thos.

Rhipidomys rufescens, Thos., also probably belongs to *Ecomys*, but the essential parts of the type skull have unfortunately been broken away.

In the transference of these species to *Oryzomys* only one name—*dryas*—clashes with a term already in use in that genus. But it so happens that this animal is probably the same as Tomes's *bicolor*, which, as the type now shows, was described from a discoloured specimen with a broken tail, while my distinction of *dryas* was based on the difference of colour and the longer tail as compared with Tomes's description, the type not being then available for examination.

With regard to *Nyctomys*, hitherto somewhat doubtfully separated from *Rhipidomys*, I am able to point out an important character which will distinguish it from that genus. This is that the first upper molar, instead of being evenly oblong, with six subequal cusps, has only five well-developed, the antero-internal one being almost or quite obsolete. The group may therefore possibly be an offshoot of the *Peromyscus* stock, with no close relationship to *Rhipidomys* at all.

III.—A new *Ecomys* and Two new Species of *Holochilus*.

Oryzomys (*Ecomys*) *mamoræ*, sp. n.

One of the largest species of the group, as large as a medium-sized *Rhipidomys*, about the same size as *O.* (*E.*) *marmosurus*. Hairs of back about 10 mm. in length.

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General colour of the type evidently somewhat altered by spirit, but apparently of the usual fulvous colour, with pure sharply defined white* belly. Hands and feet dull buffy whitish. Basal half-inch of tail furry like the body, the remainder well haired to the tip, but scarcely pencilled; pale brown throughout. Mammæ 2—2=8.

Skull very like that of a medium-sized *Rhipidomys* in general appearance, but the palate absolutely of the *Oryzomys* type. Interorbital region narrow, its edges sharply defined, with delicate ridges evenly diverging backwards; very different to the strong overhanging ledges of *O. (Æ.) marmosurus*. Palatine foramina large and open, extending back just to the level of the front of m^1 . Mesopterygoid fossa broad, parallel-sided, its anterior edge evenly rounded.

Dimensions of the type (measured on the spirit-specimen):—
Head and body 130 mm.; tail 161; hind foot 27; ear 20.

Skull: greatest length 33.5; basilar length 25.6; greatest breadth 17.5; interorbital breadth 5.2; palatilar length 14.1; diastema 8.6; palatal foramina 5.7; length of upper molar series 5.3.

Hab. Mosetenes, Upper Mamoré, Yungas, Bolivia.

Type. Adult female. B.M. no. O. S. 3. 21. Collected by L. Balzan; presented by the Museo Civico, Genoa.

The species of *Æcomys*, being distinguished from each other almost entirely by size and skull-characters, with a remarkable uniformity of coloration, I have no doubt (in spite of the discoloration of the type) about the distinction of this animal, which may be separated from its only equal in size, *O. (Æ.) marmosurus*, by its narrower interorbital region, less developed orbital ledges, and larger palatal foramina.

Holochilus chacarius, sp. n.

Allied to *H. vulpinus*, but with more slender feet and teeth.

General colour as in *H. vulpinus*. Back near "raw-umber"; sides buffy, brightening to ochraceous buff along their lower edge; belly "buff," the hairs white basally; throat, chest, and inguinal region entirely white. Ears mixed buffy and brown. Upper surface of hands pale brownish buffy, of feet glossy greyish white. The feet themselves smaller and narrower than in other species. Tail shorter than head and body, brown above, greyish white below.

* Yellow in the specimen, but this has certainly been affected by the spirit.

Skull lightly built. Back of nasals and front part of frontals markedly concave upwards along the middle line. Supraorbital edges sharp, not heavily ridged. Palatal foramina well open. Molars decidedly narrower than in other species. Last upper molar rather simpler than in other species, its anterior lamina directly transverse, scarcely thickened internally, not connected with the second lamina.

Dimensions of the type (measured in flesh):—

Head and body 175 mm.; tail 164; hind foot 38; ear 17.

Skull: greatest length 36·7; basilar length 30; greatest breadth 19·5; nasals 14; interorbital breadth 4·5; palatilar length 18; diastema 10·6; palatal foramina 7·5 × 2·5; upper molar series 6·9; breadth of m^1 2·1.

Hab. Chaco 1 league N.W. of Concepcion, Paraguay.

Type. Female. B.M. no. 1. 3. 11. 2. Collected 12th March, 1900, by Mr. T. Insley. One specimen.

“Inhabits swamps.—Raises a nest on weeds about a foot above the water.”—*T. I.*

This species is distinguishable from *H. vulpinus* of the lower Parana and La Plata, which it resembles in colour, by its delicate feet and narrow molars. When further examples, of different ages, of both forms are available for examination, I also think it probable that a real difference in the structure of m^3 will be definable.

Holochilus balnearum, sp. n.

A small species, with short tail and large teeth.

Fur long and fine, the hairs of the back 14–15 mm. in length. General colour of the usual type, the back rather greyer than in *H. chacarius*, the sides rather duller buff and the belly a deeper buff, so that there is less difference between the sides and belly, the hairs of the last-named part broadly slaty at base; pectoral and inguinal light patches more strongly contrasted white. Feet comparatively short; soles naked, granulated, with more strongly marked pads than in the allied species. Tail comparatively short, blackish above, dull greyish below.

Skull short and thickly built. Interorbital region but slightly concave mesially. Palatal foramina broad, but not widely open, owing to their rounded margins and the breadth of the septum, so that the actual slits are unusually narrow. Molars unusually broad and heavy, their length scarcely more than in *H. chacarius*, but their breadth considerably greater. Anterior lamina of m^3 thickened internally and connected with the next lamina by an enamel band. In their position also

the molars differ by facing further outwards than usual, the line of the two grinding-surfaces, if produced internally, meeting at an angle almost approaching a right angle, *i. e.* about 110° . In *H. chacarius* they meet at about 130° , and in a large example of *H. vulpinus* at over 150° . I cannot find that there is any appreciable age-variation in this character, though its exact definition is not easy.

Dimensions of the type (measured in the flesh):—

Head and body "132" mm.*; tail 133; hind foot 35.5; ear 18.

Skull: greatest length 35; basilar length 29.5; greatest breadth 20; nasals 13.3; interorbital breadth 4.3; palatilar length 18.2; diastema 10; palatal foramina 7.3; length of upper molar series 7.5; breadth of m^1 2.5.

Hab. Bañado de S. Felipe, Tucuman. Alt. 435 m.

Type. Female. B.M. no. 4.10.2.5. Collected 18th June, 1904, by L. Dinelli. One specimen.

This small species is remarkable for its thick and heavy molars and the unusually oblique angle at which they are set.

LXIX.—A new Species of *Pteridium* (*Scopoli*) from the North-east Atlantic. By L. W. BYRNE.

ONLY a single species of *Pteridium* (*Scopoli*), as defined by Günther † ('Challenger' Deep-sea Fishes, p. 105), has hitherto been described—*P. atrum* (*Risso*), a denizen of the Mediterranean coast of France, where, however, it appears to be uncommon.

On a recent cruise in the northern portion of the Bay of Biscay the S.S. 'Huxley,' employed by the Marine Biological Association of the United Kingdom upon the International Fishery Investigations, took a fish of this genus which appears to be referable to a previously undescribed species, which I propose to name in honour of my friend Dr. E. J. Allen, the Director of the Association.

Pteridium Alleni.

Form stout; body compressed in caudal region, its greatest height about 4 times in its length (without caudal fin).

* This would appear to be an under-measurement: the skin looks contracted, but the head and body still measure over 140 mm.

† The "some slightly enlarged teeth along the inner series of the mandible and on the vomer," mentioned by Günther, are stated by Moreau, on the authority of Bellotti, to be found in the male only.